

the design model, working of a working means model to be used for the one or more standard part models arranged in the design model, comprising:

a working means model information storage section for storing working means model information which indicates details of the working means model to be used in working on the one or more standard part models, said working means model information being linked with standard part model information which indicates details of the one or more standard part models;

a working means model information extraction section for automatically referring, based on information regarding the standard part models arranged in a design model, to said working means model information storage section to extract information regarding a working means model to be used to work the standard part models arranged in the design model; and

a working simulation execution section for executing a simulation of the working for the standard part models with the working means model based on design information of the design model and the information regarding the working means model extracted by said working means model information extraction section.

9. (ONCE AMENDED) A simulation apparatus for simulating, based on design information of a design model designed in a virtual three-dimensional space while one or more standard part models standardized in advance based on a specification model are arranged in the design model, working for the standard part models arranged in the design model, comprising:

a working means model information storage section for storing working means model information which indicates details of a working means model to be used in working on the one or more standard part models, said working means model information being linked with standard part model information which indicates details of the one or more standard part models;

a working means model information extraction section for automatically referring, based on information regarding the standard part models arranged in a design model, to said working means model information storage section to extract information regarding a working means model to be used to work the standard part models arranged in the design model; and

a working simulation execution section for executing a simulation of the working for the standard part models with the working means model based on design information of the design model and the information regarding the working means model extracted by said working means model information extraction section, wherein

said working means model information storage section stores information regarding a

working condition necessary for working for the working means model as information regarding the working means model, and said working simulation execution section executes a working simulation based on the information regarding the working condition of the corresponding working means model stored in said working means model information storage section, wherein
said working means model information storage section stores information regarding working spaces necessary for working with the working means model as the information regarding the working conditions of the individual working means model.

10. (ONCE AMENDED) A simulation apparatus for simulating, based on design information of a design model designed in a virtual three-dimensional space while one or more standard part models standardized in advance based on a specification model are arranged in the design model, working for the standard part models arranged in the design model, comprising:

a working means model information storage section for storing working means model information which indicates details of a working means model to be used in working on the one or more standard part models, said working means model information being linked with standard part model information which indicates details of the one or more standard part models;

a working means model information extraction section for automatically referring, based on information regarding the standard part models arranged in a design model, to said working means model information storage section to extract information regarding a working means model to be used to work the standard part models arranged in the design model; and

a working simulation execution section for executing a simulation of the working for the standard part models with the working means model based on design information of the design model and the information regarding the working means model extracted by said working means model information extraction section, wherein

the information regarding the working means model stored in said working means model information storage section includes reference position information of the working means model when the working means model works the standard part models while the design information of the design model includes reference position information of the standard part models when the working means model works the standard part models, and said working simulation execution section performs a simulation of a relationship in position/posture of the working means model to the standard part models based on the reference position information of the working means model and the standard part models, wherein

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~~said working means model information storage section stores information of a plurality of reference positions for any working means model which allows operation thereof in a plurality of different methods, and said working simulation execution section executes a working simulation according to the plurality of operation methods.~~

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13. (TWICE AMENDED) A simulation method for simulating, based on data regarding a design model displayed in a virtual three-dimensional space and designed while one or more standard part models standardized in advance based on a specification model are arranged in the design model, workability according to a working means model used to work the standard part models arranged in the design model, comprising:

providing working means model information, which indicates details of a working means model to be used in working on the one or more standard part models, and standard part model information, which indicates details of the one or more standard part models, said working means model information being linked with said standard part model information;

automatically acquiring the working means model, which is to be used in working on the individual standard part model, based on said working means model information linked with said standard part model information that indicates the details of the last-named individual standard part model;

executing a simulation of working to be performed for the standard part models using the acquired working means model; and

displaying a process of the execution of the simulation in a virtual three-dimensional space.

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22. (TWICE AMENDED) A computer-readable recording medium having a simulation program recorded thereon for causing, in order to cause a computer to execute, based on design information of a design model designed in a virtual three-dimensional space while one or more standardized standard part models are arranged in the design model, a simulation of working of a working means model used to work for the standard part models arranged in the design model, the computer to implement:

a function of providing working means model information, which indicates details of a working means model to be used in working on the one or more standard part models, and standard part model information, which indicates details of the one or more standard part

models, said working means model information being linked with said standard part model information;

a function of automatically acquiring said working means model information, which is to be linked with the working means model to be used in working on the individual standard part models used upon designing of a design model;

a function of executing a simulation of working to be performed for the standard part models based on the acquired information of the working means model; and

a function of displaying a process of the execution of the simulation in a virtual three-dimensional space.

23. (TWICE AMENDED) A designing supporting apparatus, comprising:

a standard part model information storage section for storing standard part model information regarding one or more standard part models standardized in advance based on a predetermined specification model; and

a designing supporting section for arranging one or more standard part models to perform supporting for designing a subject in a virtual three-dimensional space;

said designing supporting section including an attribute information extraction section for referring to said standard part model information storage section to automatically extract attribute information of a working means model to be used to work the standard part models arranged in the subject designed in the virtual three-dimensional space, and a design data outputting section for outputting data regarding the subject designed in the virtual three-dimensional space and data regarding the attribute information extracted by said attribute information extraction section as design data, said attribute information including working means model information, which indicates details of a working means model to be used in working on the one or more standard part models and which is linked with said standard part model information.